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OCR
RECOGNISING ACHIEVEMENT

SPECIMEN

...day ... Month 2012 – Morning/Afternoon

GCSE GEOGRAPHY A

A732/02: Geographical Skills (Higher Tier)

Candidates answer on the Question Paper

OCR Supplied Materials:
- An insert (A732/01/02/I)

Other Materials Required:
- Calculator

Duration: 1 hour 15 minutes

Candidate Forename		Candidate Surname	

Centre Number						Candidate Number				

INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Write your answer to each question in the space provided. If additional space is required, you should use the lined pages at the end of this booklet. The question number(s) must be clearly shown.
- Answer **all** the questions.

INFORMATION FOR CANDIDATES

- The number of marks for each question is given in brackets **[ ]** at the end of the question or part question.
- The total number of marks for this paper is **50**.
- This document consists of **16** pages. Any blank pages are indicated.
- These abbreviations are used throughout this paper:

UK – United Kingdom
EU – European Union
OS – Ordnance Survey

OCR is an exempt Charity

Answer **all** the questions.

1 **(a)** Read the passage below.

Energy crisis if renewables not increased!

In 2010, 80% of the world's electricity was being produced from fossil fuels. These include coal, oil, natural gas and nuclear sources which are non-renewable. These may run out causing an energy crisis. To avoid this, many countries have been trying to increase their use of renewable energy. Using renewable resources will also reduce air pollution, conserve many environments and may reduce the rate of global warming.

(i) Give **one** example of a fossil fuel.

.....**[1]**

(ii) Give **one** advantage of using renewable energy resources.

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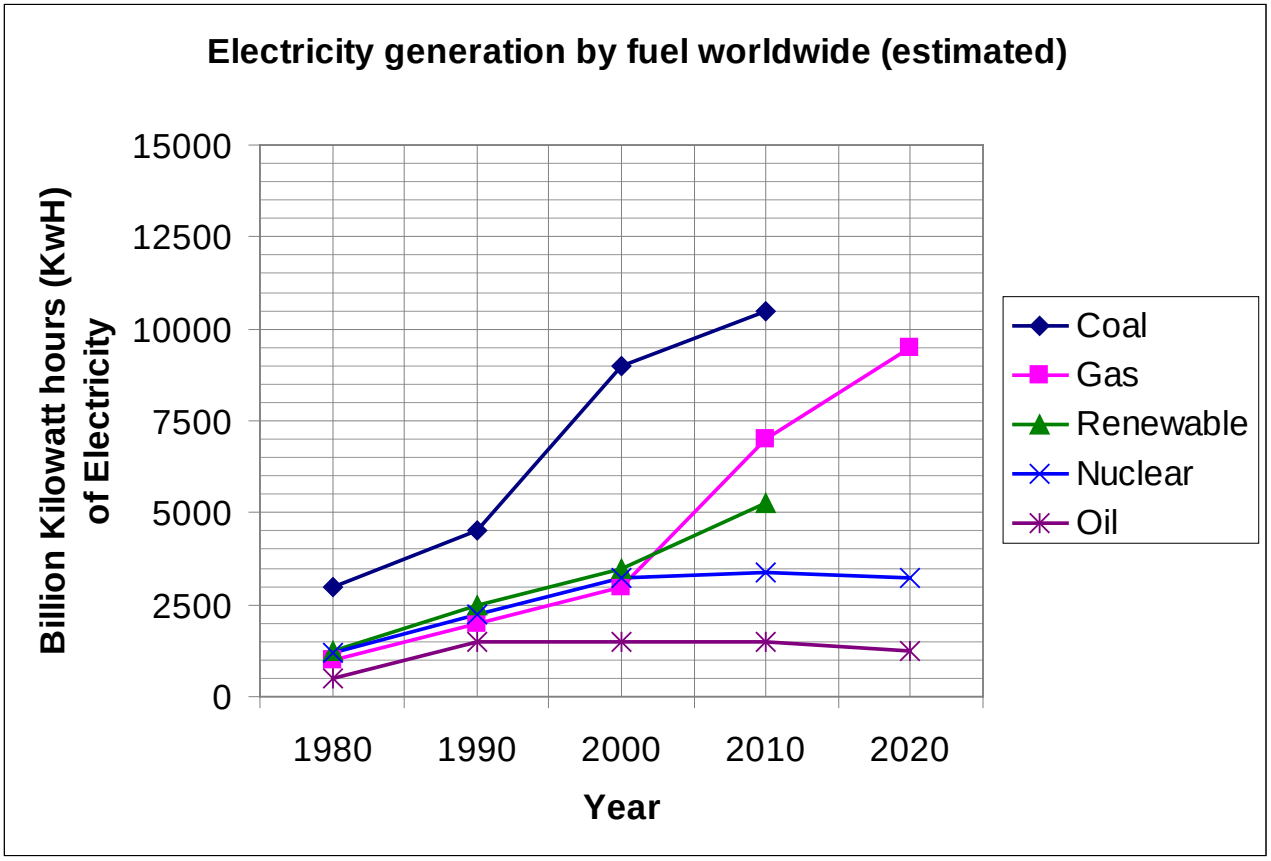
.....**[1]**

2 Study the graph below.

(a) Complete the graph below by plotting the following data:

- Estimated use of renewables in 2020: 7 250 BkWh (Billion kilowatt hours).

[1]



(b) Evaluate the contribution made by nuclear fuel and renewables to worldwide electricity generation between 1980 and 2010.

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..... **[5]**

3 Study **Resource 1** in the separate Insert.

For mountain and desert environments, explain the problems associated with developing energy using renewable sources.

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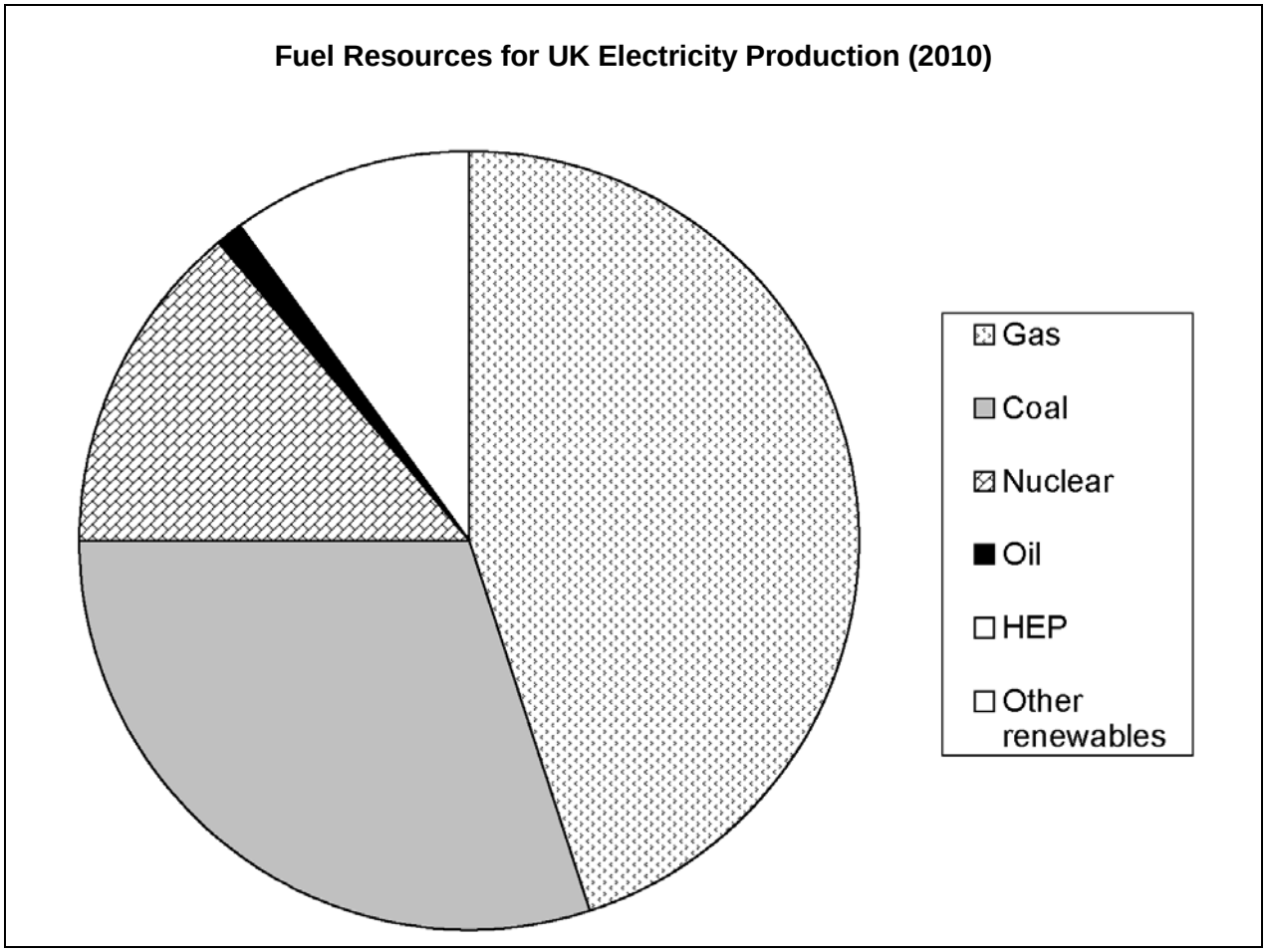
..... **[4]**

4 (a) Study the pie chart and table below.



Type of fuel	World %	UK %
Coal	39	30
Natural Gas	25	45
Nuclear	11	14
Oil	6	1
HEP	15	8
Other renewables	4	2
TOTAL	**100**	**100**

(i) Complete the pie chart and the key above for the UK, using figures from the table for 'HEP' and 'Other renewables'.

[2]

(ii) Compare the fuel resources used to produce electricity in the world with those of the UK.

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..... **[2]**

(b) In 2010, renewable resources produced 10% of the UK's electricity. The table below shows the different percentages of electricity produced from these renewable resources.

Energy type	**Percentage (%)**
HEP	83
Wind	8
Biomass	6
Geothermal	2
Other	1
TOTAL	**100**

Assess the importance of wind energy in producing electricity in the UK in 2010.

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..... **[2]**

5 (a) Study the article in **Resource 2** in the separate Insert.

Circle below the percentage of the UK's energy needs that will have to come from wind power by 2020.

3% **15%** **20%**

[1]

(b) (i) Study the map in **Resource 3** in the separate Insert. Describe the distribution of wind farms across the UK.

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..... **[3]**

(ii) The location of Low Spinney wind farm is labelled on the map.

Describe its location.

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..... **[3]**

6 Study **Resource 4** in the separate Insert.

(a) (i) The scale of this OS map is 1: 25000. Circle below another way of stating this scale.

2 cm = 1 km **4 cm = 1 km** **10 cm = 1 km**

[1]

(ii) Describe the relief of the area east of the M1, as shown on the map.

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..... **[3]**

(b) Dunton Bassett, Ashby Magna and Gilmorton are villages shown on the map. In the table below write down the name of the village that matches the description given.

Description of village	**Village name**
This village has a church with a tower. It lies east of the M1 motorway.	

[1]

(c) **(i)** Give a 6-figure grid reference for any **one** of the four wind turbines at Low Spinney farm.

Grid reference .....**[1]**

(ii) Describe the **site** and **situation** of Low Spinney wind farm.

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..... **[3]**

(d) (i) The presence of electricity pylons here was one reason the wind farm was built. Use the map key to help you find the electricity pylons towards the west of the map.

Describe the route of the electricity pylons on the map. Refer to distance **and** direction **and** at least one 6-figure grid reference in your answer.

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..... **[3]**

(ii) From **map evidence only** suggest **one other** reason why this area was chosen to build the wind farm.

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..... **[1]**

7 (a) (i) Study **Resource 5** in the separate Insert. Use **Resource 4** to decide from which direction the camera was pointing to take this photograph.

Direction .....**[1]**

(ii) Producing electricity from wind turbines is one way that the land is being used by people. Using **Resource 5**, describe **one other** way in which the land is being used by people.

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.....**[1]**

8 A group of students carried out a survey of 50 people in the three villages. They put their results in a table and also recorded some of the different opinions given by people and organisations involved in the development. These are shown in **Resource 6** in the separate Insert.

Study the table and the different opinions.

Evaluate the survey results to conclude whether or not building Low Spinney wind farm was a good decision.

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..... **[10]**

END OF QUESTION PAPER

ADDITIONAL PAGE

If additional space is required, you should use the lined pages below. The question number(s) must be clearly shown.

PLEASE DO NOT WRITE ON THIS PAGE

OCR
RECOGNISING ACHIEVEMENT

SPECIMEN H

Sample Assessment Material

GCSE GEOGRAPHY A

A732/02: Geographical Skills (Higher Tier)

MARK SCHEME

Duration: 1 hour 15 minutes

MAXIMUM MARK 50

SPECIMEN

Question			Answer	Marks	Guidance
1	(a)	(i)	Coal (✓) Oil (✓) Gas (✓) Nuclear (✓)	1	One from the list.
		(ii)	Reduce air pollution (✓) Conserve many environments (✓) Reduce the rate of global warming (✓)	1	1 x 1 One advantage of using renewable energy resources. Any one from the list. Accept different wording.
2	(a)		One mark for correct plot: 7250(✓)	1	Accurate line starting and ending in correct place = mark as correct plot.
	(b)		**Level 3 [4 – 5 marks]** Accurate detail about nuclear and renewables in the context of worldwide electricity generation. Thorough development based on statistics from the resource. Evaluation is clear and logical. **Level 2 [2 – 3 marks]** Detail about nuclear and renewables in the context of worldwide electricity generation. Some development based on statistics from the resource. Evaluation is sound. **Level 1 [1 mark]** Some details about nuclear and renewables which may not be in the context of worldwide electricity generation. Evaluation is basic or non-existent.	5	The response is to be marked holistically. Examiners to label overall level awarded at the end of the response. For Level 3, response must include evaluative comments that relate to: Differences between renewables and nuclear Relative importance of nuclear and renewables compared with other fuel sources Relative importance of nuclear and renewables compared with the total energy generation. If the quality of written communication criteria is not fully met then full marks must not be awarded. Nuclear contribution: 1980 - 1200 BkWh rising to 3000 BkWh by 2000 Slow rise to 3500 BkWh by 2010 followed by a predicted slow decline to 3000 BkWh by 2020 Contributed a significant proportion of the total in 1980 (about one sixth) but this proportion declined by 2010. Renewables contribution:

Question			Answer	Marks	Guidance
			0 Marks No response or no response worthy of credit.		1980 – under 2000 BkWh rising to 3500 BkWh by 2000 Steeper rise to 5000 BkWh by 2010 followed by a predicted slow rise to 7500 BkWh by 2020 Contributed a significant proportion of the total in 1980 (about one sixth) and by 2010 this had risen to about 20% (and by then contributed half as much as coal).
3			Indicative content: Types of renewable sources: Hot desert → Solar energy Mountain → Wind energy Problems such as: <u>Hot Desert</u> Climate = High temperatures (✓)/Lack of water (✓)/Sunstroke (✓) = present problems for workforce. <u>Mountain</u> Rocks may be hard to build on (✓)/ Land may not be flat (✓) Access for materials/builders (✓) = difficult to install equipment.	**4**	4 x 1 Candidate answers should include: Reference to both environments; max two marks if only one environment. Identification of types of renewable sources. Problems linked to specific environments. Problems should be perceived from photos but can import knowledge for credit Examples: <u>Hot Desert:</u> Sandstorms; Access for materials/builders <u>Mountain:</u> Low temperatures; Regular rainfall.
4	**(a)**	**(i)**	Correct line drawn at 98% (✓) Correct shading using the key (✓)	**2**	2 x 1 No tolerance on % Do not accept 92% (shading in reverse way).
		(ii)	Comparison of fuel resources to include: <u>Similarities:</u> Other Renewables both very low (✓) Coal and natural gas dominate in both	**2**	2 x 1 Credit any valid comparison. Clear comparison needed.

Question			Answer	Marks	Guidance
			UK and world (✓) <u>Differences:</u> More coal used in world than UK/39% to 25% (✓) Natural gas greater percentage in UK compared with world/45% to 25% (✓)		
	(b)		Indicative content: Wind has far less than HEP (✓) with 75% less (✓) Wind is ranked 2nd out of 5 (✓) Wind is higher than three other renewable (✓) with 8% compared to 6% Bio (✓) or 2% Geo (✓) or 1% other (✓)	**2**	2 x 1 Evidence that the candidate has weighed up (i.e. assessed) the importance of wind energy for both marks. Data required.
5	**(a)**		3 (%)	**1**	
	(b)	**(i)**	Indicative content: <u>Positive statements:</u> Many of Scotland's wind farms are near Glasgow, Edinburgh or Aberdeen (✓) There are clusters of wind farms in west of Wales (✓) around Aberdeen (✓) around South Wales (✓) in the south west of England (✓) <u>Negative statements:</u> There are few wind farms around London (✓) north of Glasgow (✓)	**3**	3 x 1 Three statements required. 1 mark max for only negative statements about where there are few wind farms.

Question			Answer	Marks	Guidance
		(ii)	Indicative content: In the centre/Midlands of England (✓) North west of London (✓) Close to Coventry (✓) South of Nottingham (✓)	**3**	3 x 1 Credit: Three valid points
6	**(a)**	**(i)**	4 cm = 1 km	**1**	
		(ii)	Indicative content: Height varies from around 100m contour to 150m contour (✓) Land generally rises towards east and south by around 50 metres (✓) Consists of rolling/undulating countryside with rounded hilltops (✓) Low valleys with small streams and gentle gradients (✓) Highest spot height on map at 153metres at 576884 (✓)	**3**	3 x 1 Three detailed statements needed. Credit a height/contour statistic to max 1.
	(b)		This village has a church with a tower. It lies east of the M1 motorway. **ASHBY MAGNA**	**1**	
	(c)	**(i)**	555891 (✓) 560890 (✓) 561895 (✓) 564891 (✓)	**1**	Grid reference for one of the four turbines.
		(ii)	Indicative content: Site:	**3**	Credit both site and situation for one mark each, then any other point for the third mark.

Question			Answer	Marks	Guidance
			Less than 0.5 sq km in area (✓) All four turbines located above 140 and 145 metre contours (✓) On farmland that rises to east (✓) <u>Situation:</u> To east of M1 motorway by 0.5 / 1.5 km (✓) To south of Ashby Magna by 1.5 km (✓) North west of Gilmorton along the Gilmorton Road (✓) South of Low Spinney Farm by 0.5 km (✓)		1 + 1 + 1
	(d)	**(i)**	Indicative content: The pylons start in the south (✓) at 547870 OR 548870 (✓) and travel north (✓) for just over 2 km (✓) They then go north-west (✓) for 1.25 km (✓) before leaving the map at 540900 (✓)	**3**	3 x 1 One mark max for distance. One mark max for direction. One mark max for 6-figure GR.
		(ii)	Indicative content: Small villages so not many people to object (✓) Area looks remote/plenty of open space (✓) M1 motorway could bring in materials easily (✓) Relief has some hilltops/spot height at 153m (✓) Will already be used to noise from motorway (✓) Already has spoilt view due to pylons (✓) Plenty of farmers who may be happy to	**1**	Credit any acceptable reason taken from the map.

Question			Answer	Marks	Guidance
			sell/rent land for money (✓)		

7	**(a)**	**(i)**	From the south west (✓)	**1**	
		(ii)	Indicative content: Pastoral farming/keeping cows (✓) Arable farming/growing crops (✓) Transporting electricity (✓) A hut/hovel providing shelter (✓)	**1**	One way that the land is used by the people. Credit any one way that the land is being used that can be seen in the photo. Not necessarily listed in the indicative content.
8			**Level 3 [7 – 10 marks]** Conclusion whether or not building Low Spinney wind farm was a good decision is evaluated with several points including: specific detail from both the table and the opinions and other resources in the question paper and insert; reference to the opposite choice with supporting evidence there too. Reasoning is clear and logical with good expression of language. **Level 2 [4 – 6 marks]** Conclusion whether or not building Low Spinney wind farm was a good decision is partially evaluated with: At least one point from the table and an opinion; reference to the opposite choice Good reasoning and logic in parts of the answer.	**10**	The response is to be marked holistically. Examiners to label overall level awarded at the end of the response. For Level 3, e.g. Building Low Spinney wind farm was a good decision because 80% of the people surveyed disagree – some strongly – that wind turbines will damage crops and animals. The farmer has seen no evidence of this and they should know! Farmers are not making much money at present so it will be good to get rent or to sell some of their land to the wind farm company. I know some residents don't want the turbines here but, as the map shows, there are only three small villages close by so there are not many people who will be upset and the country will get electricity for 5000 households. For Level 3, e.g. Building Low Spinney wind farm was not a good decision because 70% of the people in the survey agree strongly that the turbines will create a lot of noise; indeed only 2% disagree with this. You also need 24 000 turbines to produce the equivalent of 1 coal-fired power station which will take up a lot of land and upset a lot of people. I know that the visitor thinks that they do not spoil the view but they are much taller – 125 meters high – than any pylons or churches and, as the photo shows, they can be seen on the skyline from a long way away. If the quality of written communication criteria is not fully met then full marks must not be awarded. NB: Candidate can use evidence already covered in (i) and (ii).

			Level 1 [1 – 3 marks] Conclusion whether or not building Low Spinney wind farm was a good decision is stated with: Basic points from the table and the opinions; No reference to the opposite choice Reasoning may be weak or unclear. **0 Marks** No response or no response worthy of credit.		

Assessment Objective grid

	AO1	AO2	AO3	Total
1(a)(i)			1	**1**
1(a)(ii)			1	**1**
2(a)			1	**1**
2(b)			5	**5**
3		2	2	**4**
3(a)(ii)			2	**2**
4(a)(i)			2	**2**
4(a)(ii)		1	1	**2**
4(b)		1	1	**2**
5(a)		1		**1**
5(b)(i)		2	1	**3**
5(b)(ii)		2	1	**3**
6(a)(i)		1		**1**
6(a)(ii)		1	2	**3**
6(b)		1		**1**
6(c)(i)			1	**1**
6(c)(ii)		2	1	**3**
6(d)(i)		1	2	**3**
6(d)(ii)			1	**1**
7(a)(i)		1		**1**
7(a)(ii)		1		**1**
8		3	7	**10**
TOTAL	**0**	**20**	**30**	**50**